These are questions to test your understanding of the material. Some of these questions may appear on an exam.

1. What is the primary objective of extensible hashing? Briefly explain how this objective is achieved.

2. State the similarities and differences between extensible hashing and hashing with separate chaining.

3. How is the directory (or root) of an extensible hashing is organized? What does each entry of the directory represent?

4. Successively insert the records with the following long integer keys into the extensible hash table below in which each leaf node can hold up to 4 data elements:

   100100, 000000, 111010, 111011, 111100

```
  00 01 10 11
   (2)  (2)  (2)  (2)
     00100 010100 101000 111000
     01000 011000 101000 111001
     001010 011010 101100 110110
     001011 011011 101110 111100
```